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10/524,218	02/08/2005	David A. Rohrbacker	ACD 02.01	1008

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DALE F. REGELMAN
QUARLES & BRADY, LLP
ONE SOUTH CHURCH AVENUE AVE, STE. 1700
TUCSON, AZ 85701-1621

EXAMINER	
RAMDHANIE, BOBBY	
ART UNIT	PAPER NUMBER
1797	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

dregelma@quarles.com
rmendez@quarles.com

Office Action Summary	Application No.	Applicant(s)	
	10/524,218	ROHRBACKER, DAVID A.	
	Examiner	Art Unit	
	BOBBY RAMDHANIE	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 February 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 February 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *05/19/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3, & 4 are rejected under 35 U.S.C. 102(b) as being anticipated by O'Hagan (US3129888).

3. Applicant's claims are toward an apparatus.

4. Regarding Claims 1, 3, & 4, O'Hagan discloses an analyte chamber which can be releaseably attached to a portable calibration unit, comprising: A). A wick (See Figure 1 Item 14 & Column 4 lines 5-11); B). A liquid analyte absorbed in said wick (See Column 4 lines 5-11); a housing having an open end (See Figure 1 Item 10), wherein said wick is internally disposed within said housing (See Figure 1 Item 14); C). A first layer disposed over and enclosing said open end (See Figure 7 Item 51); D). Headspace, wherein said headspace comprises the volume within said housing minus the volume of said wick (See Figure 2B headspace above the gel and wick) gaseous analyte disposed in said headspace (See Figure 2, this is inherent to the container with the sponge inside of it), and E). wherein said gaseous analyte is capable of passing through said first layer (See Column 8 lines 30-33).

5. Additional Disclosures Included: Claim 3: The analyte chamber of claim 1, further comprising a second layer disposed over said first layer, wherein said second layer

comprises an orifice (See Column 4 lines 22-24 & Column 8 lines 30-33); and Claim 4: The analyte chamber of claim 3, wherein said orifice comprises a mechanical orifice (See Cline et al Column 6 lines 11-15 & O'Hagan Column 3 lines 65-68).

6. Claims 6-12 & 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Davies et al (US5452600).

7. Applicant's claims are toward an apparatus and a method.

8. Regarding Claims 6-12 & 14, Davies et al discloses a portable calibration apparatus, comprising: A). A positive pressure assembly capable of providing a fluid at a pressure greater than atmospheric pressure (See Figure 2 Item 42 - note gauge is capable of more than atmospheric pressure - the gauge range is 0-340 PSI as shown in Figure 3 Item 76); B). A fluid flow conduit connected to said positive pressure assembly (See Column 3 line 22 or Figure 1 Item 22 or at Item 32); C). An analyte chamber disposed adjacent said fluid flow conduit (See Figure 1 Item 30), wherein said analyte chamber comprises a wick and a liquid analyte disposed in said wick (See Column 4 lines 3-6) , D). Wherein said portable calibration apparatus cannot release said liquid analyte (See Column 4 lines 17-20). The solvent used to coat the glass wool is evaporated before the sample is placed inside the analyte chamber as a result, no liquid can be released.

9. Additional Disclosures Included: Claim 7: The portable calibration apparatus of claim 6, further comprising a detector connected to said fluid flow conduit (See Figure 1 Item 34); Claim 8: The portable calibration apparatus of claim 6, wherein said analyte chamber further comprises: a housing having an open end (See Figure 6A Item 96),

wherein said wick and said analyte are internally disposed with said housing (See Column 4 lines 13-18); headspace, wherein said headspace comprises the volume within said housing minus the volume of said wick (See Column 4 lines 13-18, inherent to the container); gaseous analyte disposed in said headspace (See Column 4 lines 13-18, inherent to the system); a first layer disposed over and enclosing said open end, wherein said gaseous analyte is capable of passing through said first layer (See Figure 6A Item 104 & See Column 4 lines 11-12); a second layer disposed over said first layer, wherein said second layer comprises a first orifice (See Figure 6A Item 108 & Column 4 lines 18-20); Claim 9: The portable calibration apparatus of claim 8, wherein said fluid conduit is formed to include a second orifice, and wherein said analyte chamber is releaseably attached to said fluid orifice such that said first orifice communicates with said second orifice (See Figure 6A Item 106 & Column 4 lines 13-30, the fluid conduit is releaseably attached into the reservoir using end caps and the entrance fitting); Claim 10: the portable calibration apparatus of claim 9, further comprising: A). A microprocessor (See Figure 4 Items 86, 88, 44, or 46) and feedback circuit interconnecting said microprocessor and said positive pressure assembly (See Figure 4 Item 44, a feedback circuit is inherent to this component because according to Davies et al it controls the thermoelectric heater/coolers and also controls the fan that cools an electric cooling fan that cools the air compressor (See Column 3 lines 23-32); Claim 11: The portable calibration apparatus of Claim 10, wherein said fluid conduit comprises a first portion and a second portion, further comprising: a valve interconnecting said first portion of said fluid conduit and said second portion of said fluid conduit (See Figure 1 Item 24); a

second feedback circuit interconnecting said, microprocessor and said valve (See Figure 4 Item 86); Claim 12: The portable calibration apparatus of claim 11, wherein said first orifice comprises an electromechanical orifice (See Figure 1 Item 24, a solenoid valve is an electromechanical orifice), further comprising a third feedback circuit interconnecting said microprocessor and said electromechanical orifice (See Figure 4 Item 46, the integrator/controller is a third feedback circuit interconnecting said microprocessor and said electromechanical orifice); Claim 14: A method to calibrate a stationary gas detector, comprising the steps: A) Providing a portable calibration apparatus (See Figure 1) comprising a portable detector (See Figure 1 Item 34) and an analyte chamber comprising a wick (See Figure 6A Item 30 and See Column 4 lines 3-6); B). Providing a concentration of said analyte in the gaseous phase to said portable detector (See Column 4 lines 17-21); C). Measuring said concentration using said portable detector (See Column 2 line 66 to Column 3 line 3); D). Providing said gaseous analyte to said stationary detector (See Column 1 lines 9-13); E). Calibrating said stationary detector using said concentration (See Column 1 lines 9-13). F). Disposing by capillary action a liquid analyte in said wick (See Column 4 lines 52-55, evaporation in the wick structure implies movement of the analyte via capillary action), such that all of said analyte is absorbed in said wick (See Column 4 lines 53-55, quickly dispersing implies absorption in said wick), and such that said wick cannot release said analyte in the liquid phase (See Column 4 lines 52-55, completely evaporates implies that no liquid is allowed to leave the wick).

10. Claim 14 is rejected under 35 U.S.C. 102(b) as being anticipated by Sorensen et al (US6234001).

11. Applicant's claim is toward a method.

12. Regarding Claims 14, Sorensen et al discloses a method to calibrate a stationary gas detector, comprising the steps: A) Providing a portable calibration apparatus comprising a portable detector (See Column 2 line 66 to Column 3 line 3) and an analyte chamber comprising a wick (See Figure 1 Item 18 and Item 30); B). Disposing by capillary action a liquid analyte in said wick (See Column 4 lines 52-55, evaporation in the wick structure implies movement of the analyte via capillary action), such that all of said analyte is absorbed in said wick (See Column 4 lines 53-55, quickly dispersing implies absorption in said wick), and such that said wick cannot release said analyte in the liquid phase (See Column 4 lines 52-55, completely evaporates implies that no liquid is allowed to leave the wick). B). Providing a concentration of said analyte in the gaseous phase to said portable detector (See Column 4 lines 17-21); C). Measuring said concentration using said portable detector (See Column 2 line 66 to Column 3 line 3); D). Providing said gaseous analyte to said stationary detector (See Column 1 lines 9-13); E). Calibrating said stationary detector using said concentration (See Column 1 lines 9-13).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cline et al (US4166087) in view of O'Hagan (US3129888).

4. Applicant's claims are toward an apparatus.

5. Regarding Claims 1-5, Cline et al discloses an analyte chamber which can releaseably attached to a portable calibration unit, comprising: A). A wick (See Column 2 lines 49-55); B). A liquid analyte absorbed in said wick (See Column 2 lines 49-55 & See Column 5 line 36 to Column 6 line 5); C). A housing having an open end (See Figure 2B Item 26), wherein said wick is internally disposed within said housing (See Figure 2B Item 28); D). A first layer disposed over and enclosing said open end (See Column 6 lines 11-15); E). Headspace, wherein said headspace comprises the volume within said housing minus the volume of said wick (See Figure 2B headspace above the

gel and wick) gaseous analyte disposed in said headspace (See Figure 2B, this is essential to the container with the gel inside of it). Cline et al does not disclose wherein said gaseous analyte is capable of passing through said first layer. O'Hagan discloses an analyte chamber wherein the first layer (See Column 8 lines 30-33) may be perforated to allow the gaseous analyte to pass through said first layer. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the analyte chamber of Cline et al with the analyte chamber of O'Hagan because according to O'Hagan his invention relates not only to the provision of an air odor control means for steady and even rate evaporation from dispensers situated in locations where air movement is incidental, but also in locations where the evaporating device is deliberately situated in the path of an air stream such as that of a fan, a ventilator, an air conditioner, or the like (See Column 2 lines 33-39). The calibration unit is not examined as a limitation in the claim.

6. Additional Disclosures Included: Claim 2: Wherein said analyte chamber cannot release said analyte in the liquid phase (See Cline et al Column 6 lines 8-11 & O'Hagan See Column 3 lines 32-36); Claim 3: The analyte chamber of claim 1, further comprising a second layer disposed over said first layer, wherein said second layer comprises an orifice (See Column 4 lines 22-24 & Column 8 lines 30-33); Claim 4: The analyte chamber of claim 3, wherein said orifice comprises a mechanical orifice (See Cline et al Column 6 lines 11-15 & O'Hagan Column 3 lines 65-68); Claim 5: The analyte chamber of claim 3, further comprising a plurality of analytes disposed in said wick (See Column 2 line 65 to Column 3 line 1).

13. Claims 13 & 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davies et al.

14. Applicant's claims are toward an apparatus and a method.

7. For Claim 13, Davies et al discloses the portable calibration apparatus of claim 12; further comprising: a heater (See Figure 6B Item 32) and a fourth feedback circuit interconnecting said microprocessor and said heater (See Figure 4 Item 88). Davies does not disclose that the analyte chamber is capable of being removably disposed in said heater. Davies et al however discloses the heater is disposed adjacent the analyte chamber (See Figures 6A Item 30 and Figure 6B Item 36. It would have been obvious to one of ordinary skill in the art to modify Davies et al to surround the analyte chamber with the heater because this would prevent vapors from coating the exit tube (See Column 4 lines 9-11), but also from coating the rest of the analyte chamber as well.

15. For Claim 16, Davies et al discloses the method, of claim 14, wherein said portable calibration unit further comprises a positive pressure fluid assembly (See Figure 1 Item 42) and a feedback circuit interconnecting said micro-processor and said positive pressure fluid assembly (See Figure 1 Item 44, 46, 88, or 86), said method further comprising the step of adjusting the fluid flow provided by said positive pressure fluid assembly (See Column 4 lines 36-37). Davies et al does not disclose wherein said detector further comprises a microprocessor. Davies et al does however disclose that the positive pressure fluid assembly may be used with a spectrometer or other analytical instrument (See Column 1 lines 11-19). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of

Davies et al with a detector that further comprises a microprocessor because almost every modern day spectrometer or analytical instrument comprises at least one microprocessor or micro processing unit.

16. For Claim 17, Davies et al discloses the method of claim 14, except wherein said analyte chamber further comprises a mechanical orifice, and wherein said portable calibration unit further comprises a feedback circuit interconnecting said microprocessor and said mechanical orifice, said method further comprising the step of adjusting said mechanical orifice. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the analyte chamber to comprise a mechanical orifice and a feedback circuit interconnecting said microprocessor and said mechanical orifice, and a step in the method, of adjusting said mechanical orifice because this would allow the vapor under examination to be confined to the analyte chamber before being introduced into the spectrometer or other analytical instrument.

17. For Claim 18, Davies et al discloses the method of claim 14, wherein said portable calibration unit further comprises a heater (See Figure 6B Item 32) and a feedback circuit interconnecting said microprocessor and said heater (See Figure 4 Item 88), and said method further comprising the step of adjusting the temperature of said heater (See Column 4 lines 7-10). Davies does not disclose that the analyte chamber is capable of being removably disposed in said heater. Davies et al however discloses the heater is disposed adjacent the analyte chamber (See Figures 6A Item 30 and Figure 6B Item 36. It would have been obvious to one of ordinary skill in the art to modify Davies et al to surround the analyte chamber with the heater because this would

prevent vapors from not just coating the exit tube (See Column 4 lines 9-11), but also from coating the rest of the analyte chamber.

18. Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davies et al in view of Becker et al (US6835927).

19. Applicant's claims are toward an article of manufacture.

20. Regarding Claims 19-21, Davies et al discloses the apparatus with the claimed limitations except for an article of manufacture comprising a computer useable medium having computer readable program code to operate the portable calibration apparatus. Becker et al discloses the use of a gas detector (See Abstract, mass spectrometers) for identifying components in chemical mixtures. Becker et al further discloses a program storage device accessible by a processor and tangibly embodying a program of instructions executable by the processor to perform method steps for the above-described methods (pertaining to the spectrometer of Becker et al). An additional embodiment is a computer readable medium storing a plurality of normalized peak intensities obtained by any of the methods performed by Becker et al (See Column 4 lines 26-32). It would have been obvious to modify the portable calibration apparatus of Davies et al with an article of manufacture comprising a computer useable medium having computer readable program code disposed therein to adjust the available concentration of a gaseous analyte because Davies et al discloses that the portable calibration apparatus will be used to calibrate various types of vapor systems such as spectrometers and analytical instruments. The article of manufacture would allow the instructions to operate the portable calibration apparatus, to be installed onto computers

used to control these spectrometers or analytical instruments so that testing, calibration, and optimization of the spectrometer or analytical instrument (See Column 1 lines 11-20) may be performed.

21. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over either Davies et al or Sorensen et al, in view of Iwanaga et al (US4457161) and in further view of Prober et al (US4259573). Regarding Claim 15, Davies et al or Sorensen et al disclose the method of Claim 14 except wherein explicitly stating the steps for which the calibration of the instruments are performed. Iwanaga et al discloses a method of calibrating and determining the gas concentration of a sample or calibrant, using a summation formula based on voltages detected (See Column 3 lines 25-32). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Davies et al or Sorensen et al with the method of using a summation-type formula (detector specific based on the output being measured) because according to Prober et al, who uses mathematical correlations of detector outputs and calibrant concentrations to determine a sample's concentration, such calculations are well known to a skilled engineer and can also be made routinely by a computer (See Column 8 lines 42-54).

Claim Rejections - 35 USC § 112

22. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

23. Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear what value or range of values "n" or "i" represents. The values or range of values may be infinite.

Telephonic Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BOBBY RAMDHANIE whose telephone number is (571)270-3240. The examiner can normally be reached on Mon-Fri 8-5 (Alt Fri off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on 571-272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bobby Ramdhanie, Ph.D./
Examiner, Art Unit 1797
/B. R./

/Walter D. Griffin/
Supervisory Patent Examiner, Art Unit 1797